Curriculum Vitae

KARMA WANGCHUK
Lecturer

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PERSONAL INFORMATION

Information Technology Department
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AREA OF INTEREST

1. Machine Learning
2. Natural Language Processing
3. Computer Vision
4. Big Data
5. IoT

EDUCATION and TRAINING

Sl. No	Programme	Year	Institute	Country
1	Erasmus ICM Staff Exchange	May-June 2023	Uppsala University	Sweden
2	Indian Science and Research Fellowship	November 2022 to February 2023	SRM Institute of Science and Technology	Chennai, India
3	Master of Engineering in Computer Engineering	2019-2021	Naresuan University	Phitsanulok, Thailand
4	Erasmus++ Staff Exchange	May 2019	Uppsala University	Sweden
5	Game Animation and IoT	December 2019	Institut Teknologi Sepuluh Nopember	Surabaya, Indonesia

6	Post Graduate Certificate in Higher Education	2018-2019	Samtse College of Education	Samtse, Bhutan
7	Specialized Programme on Big Data Management and Analytics	2017-2018	C-DAC	Noida,Delhi, India
8	Jenesys 2.0	2013	Fukuoka	Japan
9	Bachelors of Engineering in Information Technology	2010-2014	College of Science and Technology	Phuentsholing, Bhutan
10	High School	2008-2009	Yangchenphug Higher Secondary School	Thimphu, Bhutan
11	Middle School	2004-2007	Sherubling Higher Secondary School	Sherubling, Trongsa
12	Primary School	2000-2003	Trongsa Primary School	Trongsa
13	Primary School	1997-1999	Peljorling Primary School	Sipsu, Samtse, Bhutan

RECIPIENT OF RESEARCH GRANT

Sl.No	Grant	Topic	Budget	Year	Team	Remark
1	AURG*	Bhutanese Birds Detection and Recognition System Using Machine Learning Approach	Nu. 112,500	2023-2024	Karma Wangchuk(PI), Tandin Wangchuk, Tsheten Dorji	On-going
2	AURG*	Application of landslide susceptibility map in mitigation work in Samdrup Jongkhar-Trashigang Highway (PNH3) corridor.	Nu. 150,000	2023-2024	Dr. Sangey Pasang(PI), Tshering Denka, Karma Wangchuk, Chimi Wangmo	On-going
3	CST-DDC	Dzongkha NLP Projects	Nu. 2,195,800	2022-2023	Karma Wangchuk(Focal Person), Pema Galey, and Yeshi Jamtsho	Completed
4	AURG*	English to Dzongkha	Nu. 80,000	2021-2022	Karma Wangchuk(PI),	Completed

		Translation Using Neural Machine Translation Techniques			Yeshi Jamtsho, and Yeshi Wangchuk	
5	AURG*	An Investigation of Teaching and Learning Pedagogy Approaches in Engineering Education: CST Case Study	Nu. 185,000	2015-2016	Tshering(PI),Karma Wangchuk,Dechen Lhamo, Namgay Om, Pema Youden, Tshering Denkar	Completed

*Annual University Research Grant

PROJECT SUPERVISION

Sl. No	Title	Member	Year	Remark
1	Dzongkha Word Prediction System	Prerna Chhetri, Tenzin Yoezer, Phuntsho Wangmo, Tshewang Bomjan	2023-2024	Guide
2	Bhutanese Sign Language Word Recognition System	Bhuwan Sharma Koirala,Karzey Dema,Kezang Loday,Sonam Phuntsho	2023-2024	Guide
3	Dzongkha to English Translation System	Dodrup Wangchuk Sherpa, Thinley Norbu, and Sonam Yangchen	2022-2023	Guide
4	Buddhist Painting Recognition System	Tashi Phuntsho, Prem Bdr Bhandari, and Nar Maya Tamang	2022-2023	Guide
5	Smart Animal Detection System for Crop Protection in Bhutan	Tenzin Norzang, Sonam Deki, Thinley Jigme	2022-2023	Co-guide
6	Vehicle Detection and Classification in Bhutan	Penjor Tshering, Tenzin Phuntsho, Thinley Phuntsho, Tshering Pem	2021-2022	Guide
7	Crop Health Monitoring System	Dechen Wangmo, Kinley Wangchuk, Sonam Choden	2021-2022	Co-guide

PUBLICATIONS

Wangchuk, K., Navaneethakrishnan, S. C., Jamtsho, Y., & Wangchuk, Y. (2023). *Dzongkha to English translation using the neural machine translation approach*. Indonesian Journal of Electrical Engineering and Computer Science, 31(2), 885-892.

Pasang, S., Subba, B., Pem, S., Dema, S., Wangmo, C., & Wangchuk, K. *Analysis of road accidents due to obstruction in sight distance caused by foggy weather using Geographic Information System (GIS) and Artificial Neural Network (ANN) at Jumja along Thimphu-Phuentsholing Highway (Asian Highway 48)*.

Wangchuk, K., Dorji, T., Dhungyel, P. R., Galey, P., & Chhetri, M. *Fruits and Vegetables Recognition System in Dzongkha Using Visual Geometry Group Network*.

Wangchuk, K., Phuntsho, T., Tshering, P., Pem, T., & Phuntsho, T. (2023). *Vehicle Detection in Bhutan Using Convolutional Neural Network*. Zorig Melong-A Technical Journal of Science, Engineering and Technology, 8(1).

Wangchuk, K., Wangchuk, T., & Namgyel, T. (2023). *Dzongkha Next Words Prediction Using Bidirectional LSTM*. Bhutan Journal of Research and Development, (2).

Wangchuk, K., & Ieamsaard, J. (2022). *Thailand COVID-19 pandemic data analysis using big data technology*. Songklanakarin Journal of Science & Technology, 44(4).

Wangchuk, K., Riyamongkol, P., & Waranusast, R. (2021). *Next syllables prediction system in Dzongkha using long short-term memory*. Journal of King Saud University-Computer and Information Sciences.

Wangchuk, K., Riyamongkol, P., & Waranusast, R. (2021). *Real-time Bhutanese sign language digits recognition system using convolutional neural network*. ICT Express, 7(2), 215-220.

Wangchuk, K., Riyamongkol, P., & Waranusast, R. (2020, October). *Bhutanese Sign Language Alphabets Recognition Using Convolutional Neural Network*. In 2020-5th International Conference on Information Technology (InCIT) (pp. 44-49). IEEE.

Choden, T., & Wangchuk, K. (2018, March). Electronic Device Games: *An Implication on Academic Performance of Students in CST*. In 2018 International Conference on Current Trends towards Converging Technologies (ICCTCT) (pp. 1-5). IEEE.

Berglund, A., Dorji, T., Lhamo, D., Tshering, P., Von Hausswolff, K., Wangchuk, K., & Wangchuk, Y. (2020, October). *The exchange programme between new and different partners, Royal University of Bhutan and Uppsala University*. In 2020 IEEE Frontiers in Education Conference (FIE) (pp. 1-4). IEEE.

Wangchuk, K., Phuntsho, D., Subba, B., & Tshering. (2014). *Clustering CST telephone bills using SOM algorithm*. Zorig Melong, College of Science and Technology. 1(1)

PV, A., Dungyel, P., Wangchuk, K., Wangmo, K., Rai, UK., & Jamtsho, Y.. (2014). *Automatic Answer Evaluation: NLP Approach*. Zorig Melong, College of Science and Technology. 1(1)

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Website: https://karmacst.github.io/gawa/